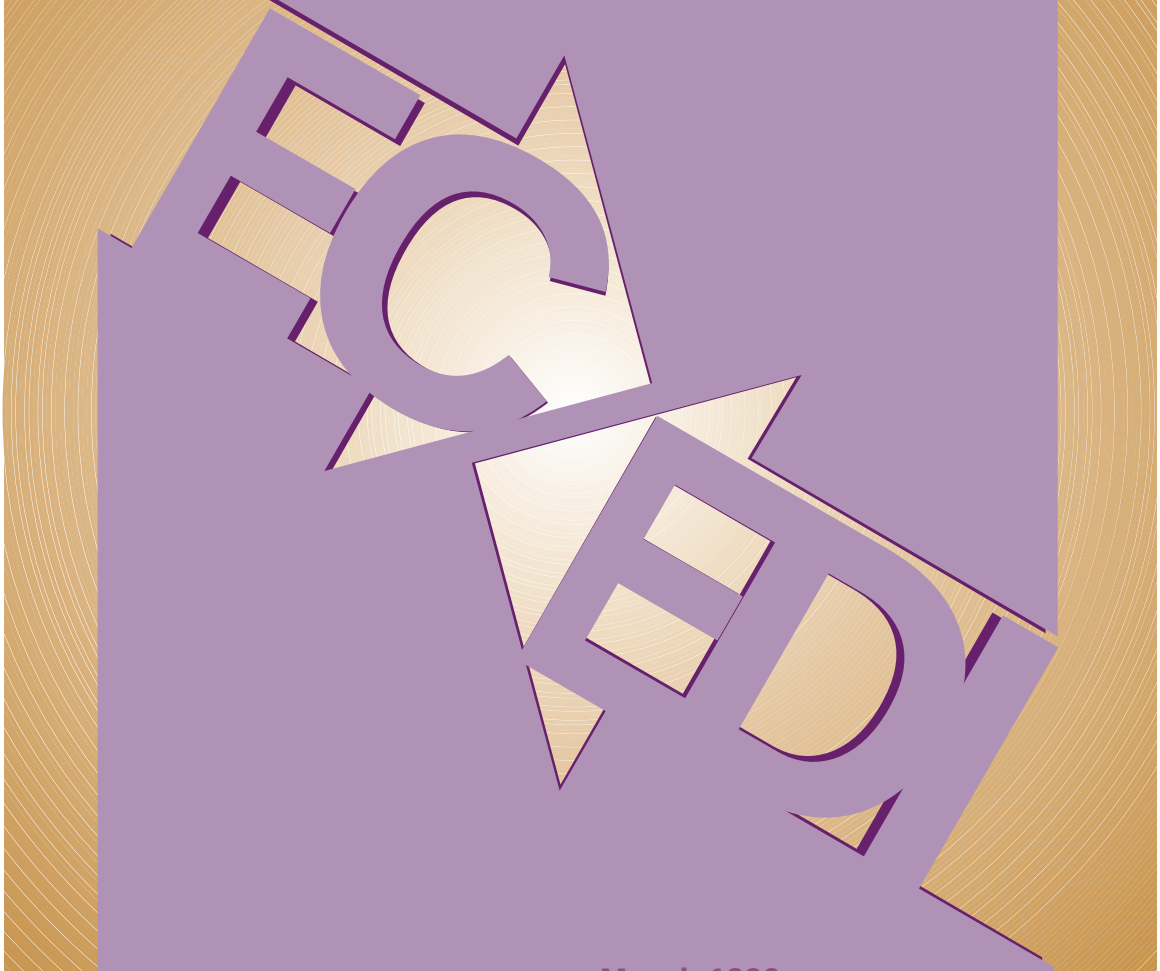
Electronic Commerce Electronic Data Interchange

Implementation Plan



March 1996

U.S. General Services Administration

Electronic Commerce/ Electronic Data Interchange (EC/EDI)

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Foreword

The purpose of this document is to describe GSA's implementation plan for Electronic Commerce (EC) as well as current activities in that area. This plan expands and updates "Streamlining Procurement through Electronic Commerce: Technical Implementation Plan" which was published in August 1994.

This plan describes the technical implementation but also looks at vendor outreach, training, financial considerations, and other areas that were not covered in the previous plan. While the focus is still primarily procurement, it recognizes EDI efforts done by other parts of GSA including transportation audits. This document was prepared by GSA's Electronic Commerce Task Force. The members are listed in Appendix C. This plan will be updated on an as needed basis.

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Appendices

1.0 Introduction

The General Services Administration (GSA) is one of the key players in Federal government purchasing. GSA is not only a major purchaser but also sets procurement policies and provides purchasing vehicles for the Federal government. GSA's major organizations, Federal Supply Service (FSS), Office of the Chief Information Officer (CIO), and Public Buildings Service (PBS), and the Federal Telecommunications Service (FTS) have responsibility over a large part of Federal government purchases of supplies and services. Information from the Federal Procurement Data System indicates that in FY94, GSA purchased over $6 billion worth of items. In addition, Federal agencies purchased over $4 billion dollars of products and services from GSA's supply schedules.

GSA also provides procurement policy management. GSA's Office of Acquisition Policy (OAP) issues the Federal Acquisition Regulation. GSA also has oversight authority over Federal agencies in information technology, real estate, and other areas.

GSA's leadership position in Federal procurement makes it a strong player in the emerging world of electronic commerce. GSA's FSS has been involved in electronic commerce and electronic data interchange for many years. Today GSA has a number of major initiatives in EC. They include: GSA's implementation of the Federal Acquisition Computer Network (FACNET); the development of GSA Advantage!, a governmentwide electronic catalogue system; the implementation of several electronic acquisition systems; and the increased use of the credit card and electronic payments. Each of these efforts will be described in more detail in the Sections that follow.

2.0 EC Program Management

Electronic commerce will touch every part of GSA. This makes it necessary to have central coordination to ensure that GSA's EC efforts are implemented to provide the greatest overall benefit to the agency.

Overall coordination is provided by GSA's Office of Acquisition Policy (OAP). In the past year OAP has formed an EC Steering Committee to provide strategic direction, and an EC Task Force to coordinate working level activities. (See Appendix C for a list of Steering Committee and Task Force members). OAP has also named a FACNET program manager to serve as the central point of contact for GSA EC activities.

2.1 EC Steering Committee

The Steering Committee consists of top managers from FSS, PBS, the Office of the Chief Information Officer (CIO), the Office of the Chief Financial Officer (CFO), FTS, and OAP. The Deputy Associate Administrator for Acquisition Policy chairs the Steering Committee. The committee was established in May 1995 and was formed to provide high-level support and focus to GSA's EC/EDI implementation. Its major emphasis is on agency conformance to the requirements of the Federal Acquisition and Streamlining Act and the implementation of GSA Advantage!.

2.2 EC TASK FORCE

The Task Force consists of representatives from FSS, PBS, CIO, CFO, FTS, the Office of Enterprise Development, and OAP. It is chaired by the FACNET program manager. The group is responsible for coordinating activities related to GSA's implementation of EC/EDI initiatives. The group began meeting in June 1995 and has created several teams to deal with EC/EDI strategic issues. The initial teams formed were: EC architecture, training, vendor outreach, and GSA Advantage!. Additional teams will be created as required.

2.3 FACNET Program Manager

The FACNET program manager is responsible for coordinating the agency's FACNET implementation and related agency EC/EDI activities. These activities include: developing a new GSA EC/EDI implementation plan, representing GSA on governmentwide efforts, managing the FACNET certification program, and coordinating GSA EC/EDI efforts among services and regions.

2.4 GSA Regions and EC/EDI

The regions are an important part of GSA's EC/EDI efforts. Most of GSA's contracting offices are located in the regions and also much of the contacts with the vendors occur there. In order to ensure that the regions are properly represented, each region was asked to provide a central point of contact for EC/EDI coordination. (See Appendix C.) This contact will help coordinate EC/EDI efforts in their region and work with the OAP and the GSA services. The regional contacts, along with service-specific efforts, will help ensure that:

1) The regions get accurate, consistent, and current information on GSA EC/EDI activities.

2) Regional concerns and issues are given proper attention.

3) The regions are clearly represented and fully participate in GSA EC initiatives.

3.0 FACNET

The Federal Acquisition Streamlining Act of 1994 made a number of major changes to the Federal procurement system. One of the most significant areas was FACNET. FACNET is a universal electronic capability that will permit potential contractors to, at a minimum, obtain information on proposed procurements, submit responses, query special databases, and receive awards on a governmentwide basis.

FACNET is a governmentwide architecture that presents a single face to industry. This Section will describe FACNET policy issues. Technical issues will be discussed in the EC/EDI Infrastructure Section.

3.1 Contracting Office FACNET Certification

Contracting offices within GSA can receive FACNET certification. This is achieved by a contracting office when it has demonstrated the ability to electronically:

1) Provide widespread public notice of contracting opportunities and issue solicitations

2) Receive responses to solicitations and associated requests for information.

Permit the private sector to electronically:

1) Access notices of solicitation

2) Access and review solicitations

3) Respond to solicitations.

Once the office has demonstrated these capabilities then the senior procurement executive will certify to the Office of Federal Procurement Policy (OFPP) that the office has implemented FACNET. The Office of Acquisition Policy will then publish a notice in the Commerce Business Daily and establish a date after which all responses to FACNET solicitations must be submitted through FACNET.

3.2 Full FACNET Certification

GSA will achieve full FACNET capability when:

1) The agency has implemented all of the interim FACNET functions

2) During the previous fiscal year more than 75 percent of the eligible contracts were entered into via FACNET.

3) The head of GSA, with the concurrence of OFPP, certifies to Congress that GSA has implemented full FACNET.

3.0 FACNET

Table 1 FACNET Certification Milestones

TASK	ACTION	TARGET
1	Develop certification package to send out to GSA contracting offices	2Q FY96
2	Certify first GSA contracting office	2Q FY96
3	25 percent of GSA offices FACNET certified	3Q FY96
4	50 percent of GSA offices FACNET certified	4Q FY96
5	75 percent of GSA offices FACNET certified	2Q FY97
6	Full FACNET certification	FY98

4.0 EC/EDI Infrastructure

This Section will describe GSA's EC/EDI architecture including how it relates to the government FACNET architecture, the functions of the GSA gateway, GSA communications systems, and agency automated procurement systems.

4.1 Governmentwide EC/EDI Architecture

The governmentwide EC/EDI Architecture is described in the document "Streamlining Procurement Through Electronic Commerce". This document was developed by the Federal Electronic Commerce Acquisition Team. The governmentwide EC/EDI architecture is based on the objective of a "single face to industry". There are four major areas that impact GSA:

4.1.1 An open systems architecture based on the American National Standards Institute (ANSI) ASC X12 EDI standard

The governmentwide architecture is based on ASC X12 EDI standards that accommodate a full range of business activities for all industries. The actual EDI business processes used by Federal agencies require specific implementation conventions (IC) to fully define Federal government transactions.

ICs take the variety of choices available in the standards and provide users a focused selection, facilitating translation programming efforts at both ends of a trading partner relationship. ICs specify which segments, elements or code values are not used, required or preferred. They also contain notes explaining how data is used, how different data relates to each other, and expanded definitions for clarity. These conventions are reached by consensus after development by interagency Functional Workgroups and a public comment period. They are maintained by the National Institute of Standards and Technology (NIST) on the Federal Registry Internet Website at http://snad.ncsl.nist.gov/dartg/edi/fededi.html.

4.1.2 Compliance testing of agency transaction sets

The Department of Defense (DoD) Electronic Data Interchange (EDI) Compliance Test Facility (CTF) in Columbus, Ohio, has the mission of ensuring, through compliance testing, that every trading partner doing business with an agency of the Federal Government, and the components of the Federal agencies, adhere to the Federal Government ICs' which are based on the ANSI ASC X12 standards. Since its establishment, the CTF's certification testing has been based on compliance with generic ICs representing the implementation of the specific X12 transaction set within multiple government systems.

All points along the path utilized in the exchange of EDI transactions are required to complete initial certification testing and recertification testing each time there is a change in that installation's hardware or software. Some sites, such as Value Added Networks (VANs) who provide translation services as a value added service (VAS) to their customers, are also required to recertify annually regardless of whether there have been any changes in their installations during the year.

4.1.3 Virtual Network

The virtual network concept is that there is a central point of connection between agencies and the value added networks (VAN). The VANs are the primary interface to the agency trading partners (vendors). The current governmentwide architecture utilizes central communication nodes called network entry points (NEP). The GSA Gateway must establish connections to the NEPs to conduct business over FACNET. There have been discussions held to determine whether all transactions should continue to go through the NEPs, or whether agencies could utilize direct connections to VANs in some cases.

4.1.4 Central Contractor Registration (CCR)

The Central Contractor Registration (CCR) database was developed in accordance with the Government-wide initiative of presenting a "single face to industry". The intent is that vendors only need to register with the Federal Government one time and that individual agencies will obtain vendor information from the CCR. It will no longer be necessary for vendors to register with every agency.

The CCR facility will, after performing appropriate validation and data integrity edits, establish a trading partner profile on their CCR database for each vendor they register. In turn, the CCR facility will broadcast the CCR data to all DoD and civilian Gateways via the 838 X12 Transaction Set.

4.2 GSA Gateway

4.2.1 General Description

Gateways have evolved as part of the continued growth of EC/EDI throughout the Federal government and private sector. They represent one of several EC/EDI entities that, to a large extent, have emerged from or have assumed greater importance in response to the Presidential National Performance Review (NPR) Acquisition Reform Initiative. The GSA Gateway is, for the most part, modeled after the DoD counterpart and conforms to the following DISA DoD EC/EDI Program Management Office and Deputy Under Secretary of Defense

(Acquisition Reform) EC/EDI definition:

> *A Gateway is a hardware, software, and communications platform providing a single point of entry (POE) from one or more Automated Information Systems (AISs) and offering - at a minimum - translation from UDF (user defined file) to X12 for outgoing data or X12 to UDF for incoming data to DoD (or GSA) customers wishing to use Electronic Commerce.*

A more precise picture of the GSA Gateway is provided below. It is important to note that, at the time this document was prepared, the long-term plan for GSA's Gateway infrastructure had not been finalized. The Office of FSS Information Systems (FI), which has been assigned the responsibility to design, implement, and operate the GSA Gateway, will finalize its long-range Gateway infrastructure design in the near future.

4.2.2 Gateway Architecture

A description of the GSA Gateway is presented below. The future architecture is planned for implementation during the 3rd Quarter of FY 96.

1. Gateway Manager:
Office of FSS Information Systems (FI)

2. Hardware Platform:

Current: Unisys U6000/65

Planned: Sun SPARCcenter 2000E

3. EDI Translation Software:

Current: EaDIPlus and Telink.

Planned: Sterling Inc., GENTRAN Mentor

4. Gateway Software:

Current: In-house software (UNIX scripts) has been developed to support mailboxing requirements for traffic to the NEPs and to disseminate traffic from the NEPs back to internal GSA AIS sites (evaluation of several vendor Gateway products is currently underway). In addition, the GSA Gateway will also handle all non-FACNET traffic (as well as translated X12 traffic - during the transition period only).

Planned: Sterling Inc., GENTRAN: Server (with "Mailboxing" option).

5. Gateway Communications:

Communications between the GSA Gateway and the DoD NEPs occur through the nationwide GSA Information Infrastructure (GII), as depicted in Figure A. The GSA Gateway is located at a GII nodal location. The DoD NEPs are also connected to the GII via dedicated circuits into

both NEP sites (i.e., Ogden, Utah and Columbus, Ohio). The Gateway and the NEPs then exchange electronic com-merce transactions across the GII utilizing the TCP/IP protocol suite.

Communications between the GSA Gateway and the Automated Information Systems (AISs) for electronic commerce within GSA also occur through the GII. The GII is shown in Figure B. The AISs are connected at various GII regional locations and exchange electronic commerce transactions across the GII with the GSA Gateway, again utilizing the TCP/IP protocol suite. Thus, the AISs within GSA and the DoD NEPs both communicate across the GII with the GSA Gateway to exchange electronic commerce transactions.

Figure A. GSA Gateway to DoD NEP Communications

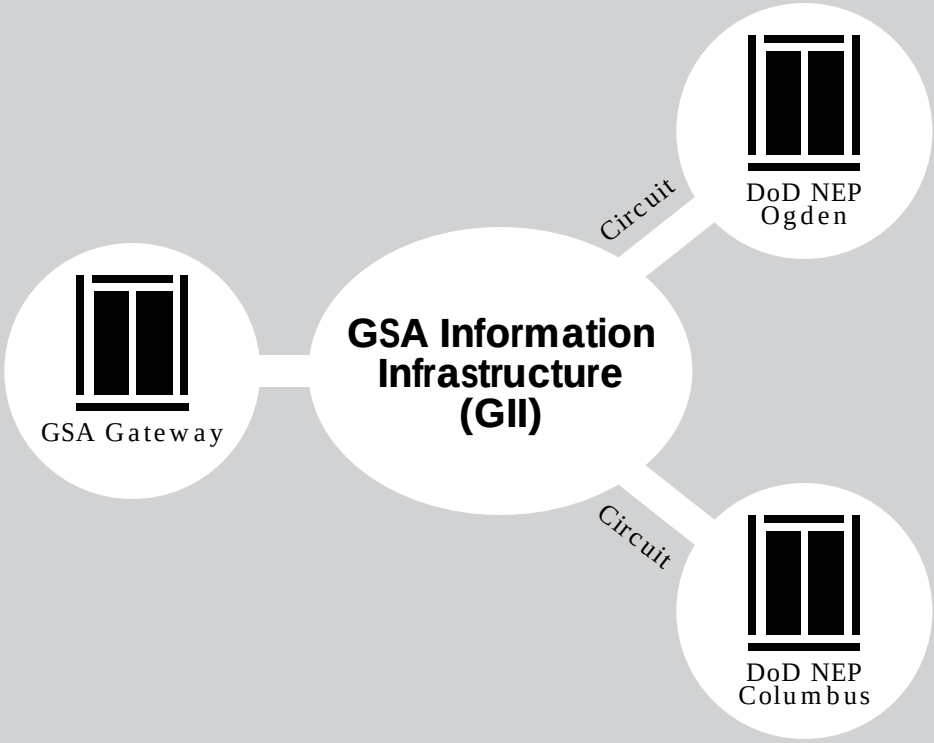
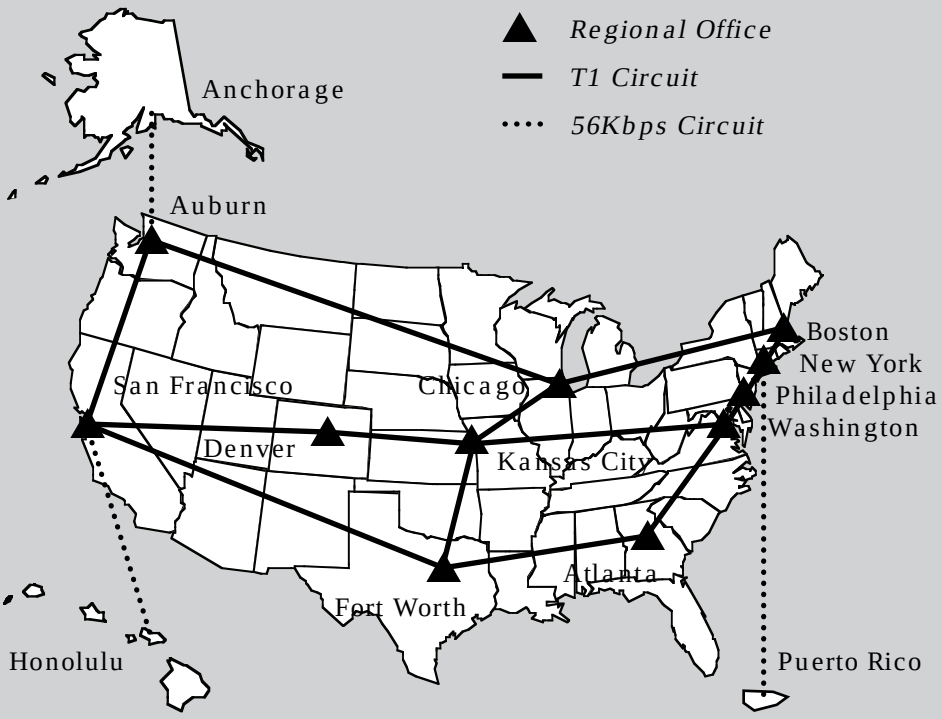


Figure B. GSA Information Infrastructure (GII)



4.2.3 Gateway Functions

Listed below are the standard Gateway functions outlined in the DoD EC in Contracting Report, dated December 20, 1994 and the Federal EC Acquisition Team (ECAT) "Streamlining Procurement through Electronic Commerce" (annotated with specific references to the GSA Gateway operation):

- Mapping of application UDF (User Defined File - from GSA AIS sites) to the X12 translator and from X12 to UDF (to GSA AIS sites)
- Translation of UDF (from GSA AIS sites) to X12 transactions
- Mailboxing outbound X12 transactions according to NEP, VAN & Trading Partner relationship (separate mailboxes for each NEP) and mailboxing inbound UDF for each Service/Staff Office within GSA

- Translation of inbound (from FACNET) X12 transactions to UDF (to GSA AIS sites)
- Transmission of UDF to AIS (by FTP - File Transfer Protocol)
- Transmission of non-FACNET X12 formatted transaction sets to appropriate Trading Partner
- Encryption, decryption, key management, and authentication
- Archiving and audit trails
- Store and forward service
- X.500 functions.

4.2.3.1 Mapping, Translation, and Mailbox Functions

The translation and mailbox functions will be supported by the GSA Gateway to the maximum extent possible given existing personnel and technical resources and constraints. The mailbox functions will support the requirement that all FACNET-bound traffic be segregated by trading partner, VAN, and NEP for pick-up by the Columbus, Ohio, and Ogden, Utah, NEPs.

Initially, the GSA Gateway will support this requirement through the use of an in-house developed UNIX script utility program. Until new hardware and software are installed, all EDI translation requirements will be handled by the EaDIPlus and TeLink translation software currently in use on the Unisys U6000/65 mainframe. The GSA Gateway will disseminate all in-bound EC/EDI traffic from the NEPs back to the appropriate internal GSA AIS site. This will be accomplished through the use of a UNIX script utility program that will use the Data Universal Numbering System (DUNS) and DUNS+4 field to access router tables that will identify which GSA AIS site is to receive the EC/EDI traffic. It should be noted that the GSA Gateway is being designed so that it will handle all GSA EC/EDI traffic, both FACNET and non-FACNET. However, it must be emphasized that all GSA AIS sites are required to direct their EC/EDI traffic through the GSA Gateway unless they are officially granted an exception by the EC Steering Committee (as outlined in the June 13, 1995 memo from the Associate Administrator for Acquisition Policy [V]).

The above referenced memo also states that only the GSA Gateway is authorized to perform X12 translation for all GSA-originated EC/EDI transactions. Under this policy, all GSA AIS sites must transmit their respective EC/EDI transactions on a UDF (user defined file [i.e. a flat file]) that has been coordinated with and tested by the GSA Gateway. In order to minimize potential problems and to reduce redundant development efforts, it will be a basic policy of the GSA Gateway to develop a

single standard UDF description for each X12 transaction set and version (e.g. one UDF for the 850 transaction, version 3040, etc.) that must be used by all GSA AIS sites. This approach will simplify the installation of vendor translator upgrades, help standardize archiving requirements, help streamline other Gateway functions, and minimize edit and format errors with FACNET.

PBS has requested a temporary

Table 2 *X12 Transaction Sets and Versions Required for the GSA Gateway*

Transaction Set	X12 Transaction Set Title	Current ICs	Required
210	Motor Carrier Freight Details and Invoice	3020	3020, 30
602	Transportation Services Tender	T2/8	T2/8
810	Invoice	3010	3010, 30
820	Payment Order/Remittance Advice	3020	3020, 30
824	Application Advice		3040, 30
850	Purchase Order (PO)	2001, 3010	2001, 30
858	Shipment Information	3010	3010, 30
860	PO Change Request (Buyer Initiated)	2001, 3010	2001, 30
870	Order Status Report	3010	3010, 30
832	Price/Sales Catalog		3050
836	Contract Award/Procurement Notice		3040, 30
838	Trading Partner Profile		3040, 30
840	Request for Quotation		3040, 30
843	Response to Request for Quotation		3040, 30
859	Freight Invoice		3040, 30
864	Text Message		3040, 30
997	Functional Acknowledgment	2001, 3010, 3020	2001, 30 3050
TA1	Interchange Acknowledgment		3040, 30

exemption to the "one translator" policy mentioned above but will re-evaluate this decision at a future date. Support of their nationwide Electronic Acquisition System (EAS) has been awarded to CACI's Standard Automated Contracting Systems (SACONS) software which includes an integral translation and gateway function. The SACONS software is designed to automatically generate a translated X12 transaction as opposed to a UDF. However, PBS, and not the GSA Gateway, will be responsible for the review and correction of any SACONS-generated X12 transactions that are rejected by the NEPs.

r the GSA Gateway

urrent ICs	Required ICs
020	3020, 3040, 3050
2/8	T2/8
010	3010, 3040, 3050
020	3020, 3040, 3050
	3040, 3050
001, 3010	2001, 3010, 3040, 3050
010	3010, 3040, 3050
001, 3010	2001, 3010, 3050
010	3010, 3040, 3050
	3050
	3040, 3050
	3040, 3050
	3040, 3050
	3040, 3050
	3040, 3050
	3040, 3050
001, 3010, 020	2001, 3010, 3020, 3030, 3040, 3050
	3040, 3050

In order for the GSA Gateway to function as the sole interface point with FACNET, it must support all X12 transaction sets and versions required by each GSA AIS site. Currently, work is underway to accomplish this for a selected number of transaction sets. However, there are more transaction sets that will need to be mapped and put through certification testing to ensure conformity with the Federal Implementation Conventions. The status of this mapping and certification testing effort is presented on the next chart.

The GSA Gateway will take the initiative to contact and coordinate the mapping and testing of all "outstanding" transaction sets/versions with each GSA AIS site. Each GSA AIS site must immediately notify the GSA Gateway whenever the need to develop new or revise existing mapping criteria is required. A schedule will be developed by the GSA Gateway to help ensure that

the appropriate priority is assigned to all pending work (in particular, special attention will be given to any work that involves an interface with other systems by a specified date).

4.2.3.2 Encryption, Decryption, Authentication and other Security Functions

At the present time, the GSA Gateway has not been formally tasked by any of the GSA AIS sites to perform encryption, decryption, authentication, or other applicable EDI security functions normally applied to the transmission of "unclassified but sensitive" data. Until the need for these more stringent security measures materialize, the GSA Gateway will provide essential access control security to protect against unauthorized access and tampering of any EC/EDI traffic.

4.2.3.3 Archiving

The GSA Gateway will support archiving requirements for all GSA AIS sites.

This includes, but will not be limited to, the archiving of all X12 formatted transactions passing from and to the GSA Gateway. In addition, within the limits of its technical and operational capabilities, the GSA Gateway will support any unique archiving requirements that an individual GSA AIS site may levy. The procedures for querying and retrieving archived EC/EDI transactions from the GSA Gateway will be described in the GSA Gateway Concept of Operations document (to be published early 1996).

Until all legal and policy issues affecting EC/EDI archiving have been resolved, the GSA Gateway will error on the side of caution and archive, indefinitely every X12 transaction and UDF that it processes.

4.2.3.4 Audit Trails

The GSA Gateway will provide the necessary audit trails so that any EC/EDI transaction can be traced from its entry point into the GSA Gateway through to its departure point. It will be the responsibility of the GSA Gateway to account for all EC/EDI transactions that it processes. The GSA Gateway will design an audit trail system that will provide comprehensive audit information in a timely fashion. A set of procedures will be developed and provided to all GSA AIS sites regarding how audit related queries and concerns are to be communicated to the GSA Gateway. Since audit trail files and logs will only be retained for a short period of time (at publication date the exact amount of time had no yet been decided), it will be incumbent upon all GSA AIS sites to notify the GSA Gateway promptly if they have any problems.

4.2.3.5 Disaster Recovery Plan

Since all GSA AIS sites are required by policy to direct their EC/EDI traffic through the GSA Gateway, it is critical that the GSA Gateway be fully operational during normal business hours. In order for the GSA Gateway to provide uninterrupted service to its customers or in order to minimize the duration of any "downtime" to its operation, a comprehensive disaster recovery plan must be developed, tested, documented and distributed. The development of such a disaster recovery plan, however, cannot be undertaken until the hardware platform for the

Table 3 GSA Gateway Milestones

TASK	ACTION	TARGET
1	Develop a UNIX script utility program for mailboxing in bound EDI traffic (i.e., traffic from the NEPS)	Completed
1	Develop a UNIX script utility program for mailboxing out bound EDI traffic (i.e., traffic to the NEPS)	Completed
3	Develop a tailored UNIX script utility program for mailboxing out bound EDI traffic to the TREK AIS	Completed
4	Map all transaction sets and versions	
4A	Coordinate mapping requirements with all GSA AIS sites	2Q. FY96
4B	Develop UDF's for all required transaction sets/versions	2-3Q FY96
4C	Test mapping of transaction sets with all GSA AIS sites	2-3Q. FY96
4D	Implement new mapping into production	Completed
5	Evaluate and select new EC/EDI HW/SW to support the GATEWAY operation	
5A	Obtain FI approval of recommended HW/SW	Completed
5B	Obtain approval of funds	Completed

GSA Gateway has been selected. At publication date, that decision had not yet been made.

4.2.3.6 Central Contractor Registration (CCR) Initial Load and Maintenance

The success of the EC/EDI initiative under FACNET depends, to a large degree, on the timely and successful registration of all contractors at the Central Contractor Registration Facility (CCRF) in Columbus, Ohio. The CCRF will, after performing appropriate validation and data integrity edits, establish a trading partner profile on their CCR data

Table 3 GSA Gateway Milestones (continued)

TASK	ACTION	TARGET
5C	Obtain approval from EC STEERING COMMITTEE	Completed
5D	Initiate process to procure GATEWAY HW	Completed
5E	Initiate process to procure GATEWAY SW	Completed
5F	Install/test new GATEWAY HW	2-3Q FY96
5G	Install/test new GATEWAY SW	2-3Q FY96
5H	Implement new GATEWAY HW/SW	3Q FY96
6	Develop/out-source 838 trading partner data base profile	
6A	Review HUD software to determine potential use	Completed
6B	Determine whether to out-source development vs. doing in-house	Completed
6C	Prepare detailed specifications for software development	Completed
6D	Start software development	2Q. FY96
6E	Test software with FACNET and all GSA AIS sites	2Q. FY96
6F	Implement new software	2Q. FY96

base for each vendor they register. In turn, the CCRF will broadcast the 838 transaction set to all DoD and civilian Gateways for processing.

Currently, the GSA Gateway does not have software that will automatically process the 838 transactions and disseminate them to all GSA AIS sites. Consequently, a predominately manual procedure is being used to process the small volume of 838's generated by the CCRF. To date, all 838's received by the GSA Gateway have been distributed to each AIS site in hardcopy format for manual review. However, once the registration effort gains momentum, this manual procedure will be inadequate for the task and will have to be replaced with a software-based solution. Software changes have been made to the EADIPLUS and TELNET translation software to enable 838 transactions to process and load. In addition, FI will also develop an 838 Trading Partner data base system on the Sun SPARCcenter 2000E using Sybase DBMS and Powerbuilder.

5.0 Electronic Acquisition System Initiatives

This Section describes the key electronic acquisition systems that will support GSA's FACNET implementation.

5.1 Background

GSA has several AIS's that will be deployed throughout the agency to provide electronic acquisition support. These include EAS, TREK, and FSS-19. FSS-19 and TREK are currently deployed at several locations. EAS will begin to be deployed during FY96. A further description of these systems can be found in Appendix A, Systems Inventory.

At publication date, a final determination had not yet been made as to when and where these systems will be deployed.

The AIS will generate a UDF for the application to be sent over FACNET. The file will be translated to an EDI format at the GSA Gateway. In the same way, information received will be translated from the EDI format back to a UDF by the Gateway before it is sent to the AIS. To complete the automated procurement cycle, the National Electronic Accounting and Reporting (NEAR) System will receive and process electronic purchase orders and receiving report records from the acquisition systems, electronic invoices from the vendors, and produce Electronic Funds Transfer (EFT) payments to the vendors. Additional information on the GSA Gateway and the AISs can be found in the Section above.

5.2 Electronic Acquisition System (EAS)

EAS is a commercial off-the-shelf electronic acquisition system that

Table 4 EAS Milestones

TASK	ACTION	TARGET
1	Delivery order for testing and delivery	Completed
2	Management overview training	Completed
3	Installation NCR, Regions 3,9,10	2Q FY96
4	Installation Regions 4,7,1,2	2Q FY96
5	Installation Regions 6,8	3Q FY96
6	Installation Region 5, CO	4Q FY96
7	User Training	2Q FY96-FY97

will be used throughout the Public Buildings Service and may be used at other GSA locations. A contract was awarded to CACI Inc. on July 18, 1995. The system will be installed in PBS nationwide during FY 96.

5.3 Transmit Records Electronically and "Kwickly" (TREK)

TREK is written in Lotus Notes. The primary module of TREK is a procurement process. The TREK system provides a format to enter data to requisition items, using predetermined routes, electronic

Table 5 TREK Milestones

TASK	ACTION	TARGET
1	TREK - Certification of 850 at Gateway	Completed
2	TREK - test with established trading partners	Completed
3	TREK - Send first purchase order buy through EDI - waiting for order from procurement	Completed
4	TREK - Develop and test Blanket Purchase Agreement, BPA Log, automatic compilation of FPDS data, and Vendor Report Card database.	2Q FY96
5	TREK - Recruit and test EDI with additional vendors	Completed
6	TREK - Develop flat file format for receiving report and purchase order for communication with CFO office	2Q FY96
7	TREK - Test transmission of flat file formats to 7BC organization	Completed
8	TREK - Develop and test SF 18 Request for Quotation in Notes and develop 840 translation.	Completed
9	TREK - Certification of 840 at Gateway	Completed
10	TREK - Send first RFQ through EDI and receive 843s	2Q FY96
11	TREK - Install TREK in new offices and train users	Continuous

Table 6 FSS-19 Enhancement Milestones

TASK	ACTION	TARGET
1	RFQ (840/843) software development effort	
1A	Develop test software	Completed
1B	User training	2Q FY96
1C	Implement software	2Q FY96

signature and locked fields to ensure security. Originators of a requisition choose a route based on the signatures required and its final destination. Once the certifying official's signature is added the data is locked. The record is forwarded to a procurement office where an analyst creates purchase orders using the data provided on the requisition. A button on the form carries over all common data and the analyst fills in additional fields and edits existing data. The form is electronically signed by a contracting officer as the system checks a database for the warrant level of the contracting officer.

The purchase order and receiving report are electronically transmitted to a remote Office of the CFO and the TREK document is updated with a notice that it has been processed by the Office of the CFO, time and date. The procurement official sends the purchase order to the vendor either manually or through EDI. An Export EDI button checks for valid signatures, verifies EDI fields and DUNS numbers, and exports the record. It is translated into X12 format (TS850) and transmitted to FSS and through the GSA Gateway. All responses from the vendor will be noted on the record status report. The Request for Quotes (TS840) is presently being developed in TREK.

5.4 FSS-19

FSS-19 is a legacy system implemented in November 1980. FSS-19 automated FSS's logistics functions and most of the procurement administrative functions, including contract data, item data, order writing, contract administration, and finance interfaces. In 1987, EDI capability was established for purchase orders. FSS is currently updating the FSS-19 to meet FACNET requirements.

5.4.1 Interaction with Finance

5.4.1.1 FEDPAY

FEDPAY is an accounts payable system which allows for interactive

Table 7 FEDPAY Milestones

TASK	ACTION	TARGET
1	Develop migration plan with FSS including U6000 changes and migrating trading partners	2Q FY96
2	Produce implementation guidelines based on FEDERAL IC'S	2Q FY96
3	Implement system changes	3Q FY96
3	Bring up new partners under 3040 IC'S	3Q FY96
4	Finalize conversion of current trading partners to 3040 IC'S	FY96

user input during the day and batch cycle processing at night. On a daily basis, the FSS-19 system may generate approximately 2,000 purchase orders which are mailed, faxed, or sent via EDI to various vendors. A file of these purchase orders is transmitted to FEDPAY. Once vendors have shipped the goods, they will forward their invoices to the Office of the CFO. Since September, 1994, the FEDPAY subsystem of NEAR has had the capability to process EDI invoices. As of August, 1995, The Office of the CFO is processing EDI invoices from 30 vendors. These invoices represent approximately 8% of the total number of invoices processed by FEDPAY each month. At publication date, there were 18 additional vendors transmitting test invoices. Office of the CFO personnel are continually working with the vendors to promote the use of EDI for invoicing.

5.4.1.2 Migrate FEDPAY EDI to the GSA Gateway

Currently, the FEDPAY EDI 810 Invoices are sent from the vendors to a mailbox on the Sprint VAN. EDI transactions are pulled from the VAN and processed on the U6000 system. CFO staff will work with the GSA Gateway personnel to determine the differences between the current processing and the new Gateway process. Once analysis of the impact on FEDPAY EDI is complete, necessary changes will be made to facilitate the processing of FEDPAY invoices through the GSA Gateway.

5.4.1.3 FEDPAY EDI 810-Invoice Implementation Conventions Project

The implementation conventions currently in use by FEDPAY EDI are based on X12 version/release 3010. They were developed by Office of the CFO personnel to define the data elements required for an invoice to be input to FEDPAY. The current Federal IC for the 810-Invoice is based on X12 version/release 3040.

The FEDPAY EDI process will be updated to enable the use of the Federal Implementation Conventions. This modification will allow FEDPAY to support GSA Advantage! by accepting EDI invoices based on the current Federal IC version/release 3040. A plan will be developed, with FSS, to migrate current FEDPAY trading partners from version/release 3010 to version/release 3040.

6.0 GSA *ADVANTAGE!*

Currently, GSA offers its supply and services customers a variety of methodologies to access and order from our contracts. In each method of supply there are several types of systems to appeal to varying levels of sophistication. No single method, however, can access all of the offerings, and none offer the complete range of payment options.

6.1 Background

FSS-19 supports the major FEDSTRIP/MILSTRIP logistics system by which agencies access the Stock and Special Order programs. In addition, FSS developed an on-line requisitioning system to capture this same data in its Multi-Use File for Interagency News (MUFFIN) bulletin board system. The Customer Supply Centers (CSC) created both on-line (ROCS) and touch-tone telephone ordering in addition to their call-in feature. Federal Supply Schedules are still accessed by paper catalogs from contractors, with limited automation from larger contractors or third party providers. The MUFFIN system was designed to provide agencies with current award information, but was unable to provide the more important product level data due to volume and technology constraints. Several years ago, the Online Schedule System (OSS) began receiving product data from contractors in a standard format for display on a menu-driven bulletin board. This has provided agencies a means of reviewing multiple catalogues and performing price analyses.

6.2 Why GSA *Advantage!*

There are many realities as well as opportunities which make this the right time for GSA Advantage!. First and foremost, the rapid rise in Internet, PCs, and their accompanying technologies gave the end user the ability to provide, search and display large amounts of data in a user-friendly fashion. Particularly in the Federal Supply Schedules arena, agencies have constantly complained about the difficulty of getting and maintaining the product data from all 5000 contractors. Storage space, time, and inability to search and compare data have always been a problem.

On the procurement side, recent initiatives have changed the way people buy, as well as the way they communicate with contractors. The International Merchant Purchase Authorization Card (I.M.P.A.C.) has made ordering easier and allowed buyers to go to the local marketplace. This is not necessarily a cheaper source, but it is familiar, and through advertising, product and price data is readily available. The Federal Acquisition Streamlining Act created FACNET and

established EDI as the standard electronic method to send and receive data from contractors. Agencies were required to establish EDI capabilities in their procurement shops and compare quotes. Obviously, both the I.M.P.A.C. and FACNET initiatives have the potential to drive procurements away from the GSA realm unless GSA sources are also easy to use.

6.3 Relation to FACNET

FACNET was based upon the requirements of the Presidential Memorandum dated October 26, 1993, which focused on the old small purchase procedures (now simplified acquisitions). Its structure was made robust enough to handle all types of procurements, and even non-acquisition transactions.

GSA Advantage! is a shopping, selecting and ordering system that can provide FACNET capabilities to all agencies. It utilizes the FACNET architecture and wherever an EDI transaction is applicable, the data will flow through the designated Network Entry Points (NEPs). It will connect to the NEPs at the GSA Gateway in FSS, and will also access the Central Contractor Registration (CCR) database through that Gateway. For security, catalog

Table 8 X12 Transaction Sets and GSA Advantage!

PROCESS	EDI TRANSACTION	SIMPLIFIED ACQUISITIONS	GSA ADVANTAGE
Registration	838	YES	YES
RFQ	840	YES	NO
Quotation	843	YES	NO
Order	850	YES	YES
Proc Notice	836	YES	NO
PO Mod	860	YES	YES
Invoice	810	YES	YES
Remittance Advice	820	YES	If through GSA, else I.M.P.A.C.
Catalog	832	NO	YES

data will have to include the Trading Partner Identification Number (TPIN) assigned at the time of registration in CCR.

6.4 Overall Flow and Agency Options

Agencies will be able to log in with either their GSA Account Number (the current Activity Address Code, AAC/DODAAC) or a valid I.M.P.A.C. account number and password. They can browse through the various items, arranged in "storefronts" such as the Hardware Store, Furniture and Furnishings Store, Office Products Store, etc. As an alternative, items can be searched by number, noun, or other characteristic. To facilitate internal system processing, all items have been placed into categories labeled with Product Codes, or "P-codes", based on a tree structure established by the responsible Acquisition Center. Invisible to the customer, it allows them to gradually narrow the search based on a logical sequence of menus, or go directly to an item if the number (National Stock Number or Manufacturer's Part Number) is known.

Once an item is selected, additional description and/or pictures can be reviewed. The system will also display any delivery or pricing options, whether it be zone or quantity breaks, or more complex delineations where items are available quickly from the CSC, or from Stock, or (for high quantities) directly from the contractor.

When an order is complete, an agency can elect to pay using either the GSA account number or I.M.P.A.C. For Schedule items an additional option of creating an agency order is available. This allows a smaller agency who does not need to invest in an expensive procurement EDI system to still take advantage of the efficiencies offered by EDI orders. Schedule item data can also be downloaded to an agency's own system, if they already have EDI capability or need to register the data internally. An additional feature will be included as Schedules are added to GSA Advantage!: a new Maximum Order clause that eliminates the concept of a ceiling, and instead treats the value as a threshold beyond which additional discounts are possible from the contractor.

As customers order on GSA Advantage! it creates requisitions (which is done "invisibly" for those not well versed in FEDSTRIP/MILSTRIP) that are fed into the existing FSS-19 system, or utilizes FSS-19 data to create EDI purchase orders for transmission to the contractor. For customers using GSA Advantage! to create their own orders, Advantage will combine agency data with FSS-19 data to create EDI orders. In all

cases an agency can go back into the system to check status, or get order history, possibly to resubmit regularly recurring requirements.

On the contractor side, all Schedule contracts will require catalog data be submitted electronically. Contractors will have a choice initially, of using a pre-formatted disk supplied by GSA, or transmission of transaction set 832, Price Sales Catalog. The latter is more efficient, and will be the only option available to contractors previously prototyping on the On-line Schedule System (OSS). The pre-formatted disk will be a transition requirement to the 832 for other contractors. Price reductions can automatically update the system, and other types of modifications can be transmitted more efficiently for a quicker review by the contracting officer followed by posting to the system.

The system uses the technology of the Internet, but is not Internet

Table 9 GSA ADVANTAGE! Milestones

TASK	ACTION	TARGET
1	Display current Stock items for browsing.	COMPLETED
2	Mail initial brochures to agencies	COMPLETED
3	Mail initial brochures to contractors	COMPLETED
4	Display Order History and Status	COMPLETED
5	Videotape demo of Advantage	COMPLETED
6	Create Orders for FEDSTRIP/MILSTRIP	COMPLETED
7	Finalize roll-out for remaining Schedules	COMPLETED
8	Send announcement letter to Schedule Contractors	COMPLETED
9	Print new brochure	COMPLETED
10	Allow I.M.P.A.C. ordering	COMPLETED

dependent. All GSA data is kept on separate, secure databases, while agencies use the Internet to access the information and the Netscape browser to create orders. In the future, Advantage! may link to contractor web sites in order to provide access to photos and expanded descriptive information without having to replicate it on Advantage!. Security is currently provided by the Netscape browser software which goes into encryption mode when the browser and the server link. Future browsers may be allowed, if and when, they provide the same security level. For those without Internet connectivity, a product called Lynx will allow dial-in to a server which acts as a browser. This method will not display any graphics or photos but will provide all of the textual information. In the future, there will also be an operator service for those without computers.

Table 9 (continued)

TASK	ACTION	TARGET
11	Migrate OSS item data to Advantage	2Q FY96
12	Add the first FSS Schedule data	2Q FY96
13	Begin sending Start-up kit to contractors just prior to plan dates	2Q FY96
14	Begin modifying Schedule contracts	COMPLETED
15	Add Schedule ordering	2Q FY96
16	Add Customer Supply Center items	1Q FY97
17	Add Special Order Program Items	1Q FY97
18	Final Schedule data on Advantage	4Q FY97
19	Marketing to agencies: demos, conferences, handouts, video	Continuous
20	Outreach to vendors and contractors	Continuous

7.0 Other Major EC/EDI Initiatives

This Section describes major non-acquisition EC systems and pilots being done by the CFO and other organizaitons.

7.1 Finance Systems

7.1.1 Invoice Tracking and Payment System (ITAP) Transaction Set 810 Invoices Project

The Office of the CFO is committed to the strategy of "full-cycle" procurement.. It is imperative that GSA be prepared to process all procurement transactions electronically. This project has been initiated to ensure that the Office of the CFO, ITAP subsystem, will be prepared to process transaction set 810 Invoices for all purchase orders, except those processed by FEDPAY, issued by all Services/Staff Offices. The 810 transaction set will follow prescribed 3040 Federal Implementation Conventions.

In addition to the invoices received from the contractor, CFO staff have developed standard record formats to facilitate the electronic interface of data between Services and Staff Office (S/SO) systems and the Office of the CFO system. The purchase order and receiving report records have been defined and shared with S/SO personnel. The ITAP project team will coordinate with S/SO staff on the details of implementing the standardized electronic records.

7.1.2 Payment Methods

The Office of the CFO issues payments by paper check and electronic funds transfer via the Department of Treasury, Financial Management Service (FMS). EFT is the GSA preferred method of payment. However, it should be understood that "electronic funds transfer" is a generic term which encompasses many different types of electronic payments. GSA's EFT payments are made through the FMS Vendor Express system.

In order to increase the number of EFT payments, the Office of the CFO is pursuing alternate means for making electronic payment through two pilot projects.

7.1.2.1 Pilot 1. Invoiceless Electronic Payments

Establish an account at the Federal Reserve allowing authorized Automated Clearing House (ACH) debit transactions to be presented for payment. Unauthorized debit transactions, not meeting pre-established edit criteria, will be rejected by the Federal Reserve. Additionally, daily and monthly pre-established transactions dollar limits can be established for internal control purposes. Valid ACH debit transactions are forwarded to the Kansas City Treasury for posting to the Treasury General Account. The Treasury will forward the ACH debit transaction along with the addendum record for each ACH

debit transaction to GSA to update NEAR. GSA, in the near future, will contact approximately 50 interested vendors to establish the data requirements of the addendum record.

7.1.2.2 Pilot 2. Electronic Payment Record

Through the current contract with Rocky Mountain BankCard System (RMBC) for the I.M.P.A.C. Government-wide credit card program, GSA proposes to send electronic payment records, in a predetermined format, to RMBC's parent company First Bank System (FBS). The proposed pilot would start in February 1996 and end August 1996 when it would be evaluated for any efficiencies and/or cost effectiveness. Under the proposed pilot there will be two stages. The first stage is from February through April 1, 1996 only vendors who could identify and post electronic payments based on account numbers could participate. This is due to the required sub-records which currently do not contain a field for an invoice number. The second stage requires a new sub-record for the invoice number and is planned for release in April 1996. GSA would sent an electronic payment record to FBS where it would verify the record layout and the required sub-records. Within this record is a biller ID number assigned by VISA or the vendor, which GSA will supply in the electronic payments submission to FBS. FBS would forward GSA validated payment records to the VISA credit card clearinghouse system. Upon acceptance of payment records by VISA, VISA would insert the routing bank number and identifying account payee information, based on the biller ID number, allowing the receiving bank to post the funds to the payees account. The receiving bank is responsible for providing the payment identifying information to the payee, i.e., account number or invoice number. There are circumstances where the payment can be returned.

Additionally, the specific goal is to establish the use of the I.M.P.A.C for all supply and service micro-purchases less than $2,500 and for as many as possible above that level. Using the card in lieu of certified invoices and using PIX (Paperless Information Exchange) for electronic payment of I.M.P.A.C. invoices will save processing costs in an organization and the Office of the CFO. It will also result in higher rebates from RMBCS, the I.M.P.A.C. contractor.

7.1.3 Accounts Payable Reengineering Team

The goals of this project team are to develop a paperless process, maximize automated procedures and reduce the processing cost per invoice. The core team strategy is to have a "living" document which they will re-evaluate every six

months. For the initial phase the team has identified several short-term initiatives including one to review the laws, regulations and procedures to determine what can be changed in the accounts payable process; a second to develop current baseline costs incurred to process various types of payment documentation; and another to develop standard record formats for the electronic transmission of internal documents such as the purchase order and receiving report.

7.2 FSS EDI Interface with Defense Transportation

Currently FSS is receiving 9,000-10,000 Government Bills of Lading (GBL's) via EDI per month, with accompanying invoices and vouchers, from Defense Finance and Accounting Service-Indianapolis (DFAS-IN). At the end of this calendar year FSS will have about 110,000 electronic bills on the Office of the CFO data base. This equates to about 330,000 transactions with accompanying invoices and vouchers. Military Traffic Management Command (MTMC) and DFAS-IN are cooperating in efforts to increase this volume by approximately 300,000 bills, or 900,000 transactions, in the next calendar year.

FSS has had discussions with the Department of Energy and the Post Office on interfacing EDI capabilities to allow them to submit their shipment and payment data via EDI. This will be an additional 180,000 transactions annually.

Voluntary tenders, Guaranteed Traffic, and Personal Property tenders will all be submitted to FSS by MTMC via EDI. They are currently receiving Voluntary tenders and preparing to receive Guaranteed traffic and Personal Property tenders. The estimated annual volume for Voluntary and Guaranteed Traffic tenders is 25,000 transactions. Personal Property tenders and the submission of Personal Property GBL's by EDI appear to be at least a year away.

7.3 FTS EDI Project for Telecommunications Invoices

GSA is working with the US Department of Agriculture (USDA) and other Federal agencies to use EDI to process telecommunications service providers invoices electronically. The pilot phase of the project will provide an initial operational capability to translated 811 Transaction Sets to usable files for GSA and USDA's existing billing applications. The first year of the project will have four pilots, including Regions 4 and Region 10. Depending on future requirements and infrastructure, the pilots could grow to be a governmentwide EDI Gateway to handle all agencies local service invoices and statements.

8.0 Vendor Outreach

One of the keys to a successful implementation of electronic commerce at GSA is an effective vendor outreach effort. GSA deals with thousands of vendors, both nationally and internationally. GSA also deals with a wide variety of vendors because of the unique missions of the FSS, CIO, FTS, and PBS. A large number of these businesses are small and many are unfamiliar with EC and EDI. GSA vendor outreach will stress education as well as providing information. GSA vendor outreach will also stress not only coordination between the various components of GSA but also coordination with the regions and with governmentwide efforts.

8.1 Objectives

The objectives of an effective GSA EC vendor outreach program are to:

- Ensure GSA's vendors receive accurate, consistent, and complete information on EC/EDI, especially the benefits of EC/EDI and how to do EC/EDI with the Federal government. This information should be consistent both throughout GSA and also with any governmentwide documentation and efforts.
- Maximize full-cycle EC/EDI
- Move high volume/high dollar vendors to use EC/EDI
- Facilitate the use of EC/EDI for small businesses.

8.2 GSA Vendors

GSA uses thousands of vendors for its wide variety of programs. In addition to small businesses, the outreach program should include:

- Vendors who will be bidding on public broadcast RFQs.
- GSA schedule vendors who will be receiving purchase orders and payments and sending electronic catalogues and invoices.
- Non-schedule vendors who will be receiving purchase/delivery orders and payments and sending out invoices.

Each of these groups will require a slightly different approach to outreach. Some of these need to be further segmented by service. GSA services will also be conducting their own outreach efforts in coordination with the GSA-wide efforts. GSA vendor outreach efforts will concentrate on getting vendors to do full-cycle electronic acquisitions, including payment and invoicing as well as the ordering cycle.

8.3 Vendor Information Needs

While each vendor is different, all GSA vendors should get the following minimum information:

- The benefits of doing EC/EDI

with the government

- How a vendor registers to do EC/EDI with the government
- How to chose VANs and software
- What is the Central Contractor Registration database
- How to do EC/EDI with GSA and the Federal government
- The benefits of using EFT
- GSA EC/EDI programs and initiatives
- Sources of help both internal GSA and governmentwide

GSA will also use forums, conferences and other types of discussion vehicles to solicit vendor feedback to ensure that their needs are being met.

8.4 Vendor Outreach Implementation

The overall coordination of GSA vendor outreach efforts will be done by the EC Task Force vendor outreach team with input from the EC Steering Committee and the GSA regions. The regions can play a key role in vendor outreach efforts because they are often the primary GSA points of contact with the vendor community. Through business service centers and other vehicles, the regions can play a lead role for information dissemination and soliciting vendor feedback. While most of the vendor outreach will be done by the individual services and regions, the following overall coordination needs to be done:

8.4.1 Develop a standard package of materials to give to GSA vendors.

This package will include service specific information as well as standard information on doing g EC/EDI with GSA and/or the government. A standard package of materials will help ensure that the vendors get consistent and accurate information. The materials will also be consistent with governmentwide materials. The package will be developed by GSA's EC Task Force vendor outreach team in coordination with the governmentwide ECPAMO.

8.4.2 Utilize existing GSA outreach efforts and organizations to disseminate information

GSA already has very active outreach efforts with GSA vendors, including forums, conferences, and business service centers. The EC outreach effort will take advantage of these existing avenues to disseminate EC/EDI information.

8.4.3 Tie-In with Governmentwide efforts

GSA outreach efforts will also tie-in with governmentwide efforts as much as possible to:

- Avoid vendor confusion and reduce vendor costs of having to deal with multiple agencies on EC/EDI materials
- Ensure that there is a "single face to industry" as much as possible to avoid redundancy, duplication of effort, and inefficient use of resources.
- Tie-in with governmentwide efforts could include: sharing materials, working with multiple agencies on vendor conferences or training, and ensuring that the ECAPMO is kept informed about GSA outreach efforts.

8.4.4 Target vendors by service/program/region

A key part of vendor outreach will be targeting vendors to maximize EDI usage. Each service or staff office will identify:

- High volume vendors
- Most commonly used FSC or SIC codes and key vendors who provide supplies or services for these areas
- Project time frames for EDI implementation by SIC code, region, or high-volume invoice

This information will help GSA maximize its EC/EDI implementation to concentrate on getting key vendors and SIC codes cut over to EDI as soon as possible.

8.4.5 Educate small businesses

While GSA's outreach will be targeting high volume vendors, there will also be a major focus on ensuring that small businesses are full partners in the GSA's EC/EDI effort. GSA has a number of forums and conferences that are targeted for small business. These conferences will include information and training on EC/EDI. GSA's EC Task Force includes several members from GSA's Office of Enterprise Development and Small Business Technical Advisors who focus on small, disadvantaged and women-owned businesses.

8.4.6 Provide training and information for Buyers

Since most of the contacts with the vendors will be done by the buyers, it is important that buyers receive EC/EDI training and current, accurate information. The next Section discusses training in detail but it is worth mentioning in this Section because good buyer training is a key to effective vendor outreach.

9.0 EC/EDI Education and Training Program

Another important part of a successful electronic commerce program is proper training for agency personnel who will be implementing and using EC/EDI. This Section focuses on: who needs EC/EDI training, what types of training they should get, how training will be done, and what other sources of information are available outside of formal training. Training should also emphasize the use of EC/EDI to change or even eliminate existing processes. A coordinated training plan for the agency will be developed by the EC Task Force.

Today GSA, as well as large and small companies and organizations from around the world, are transacting business electronically using EC/EDI. Training can provide GSA the edge necessary to be proactive in the EC/EDI strategy and gain the maximum benefit from implementing EC/EDI.

9.1 Defining EC/EDI Training Needs

Each GSA organization involved in electronic commerce needs to determine what their EC/EDI training requirements will be. Training considerations should include the following:

- Who needs training
- Level of training necessary (awareness, functional, technical)
- Expectations of the training and accomplishments
- Provider of the training (contractor/in-house instruction)
- Cost of training

Organizations should coordinate their training requirements with GSA's EC Task Force to ensure that the program is consistent with any agencywide program.

9.2 Who Needs Training?

While everyone in GSA needs to be aware of the impact of EC/EDI, several organizations in particular need specific training.

9.2.1 Training for Procurement/ Finance Personnel

Procurement and finance personnel, especially those dealing with mostly simplified acquisition procedures will be most directly impacted by EC/EDI. They will need a variety of training including but not limited to:

- EC/EDI overview
- Technical training for support staff
- Specific transaction sets being used
- Use of common databases
- Procurement/finance coordination
- Implications of FACNET and

FASA, including simplified acquisition procedures

- Use of GSA Advantage!
- Internal automated information systems and FACNET
- Outreach to vendors

9.2.2 Training for Technical Personnel

The EDI infrastructure will need a variety of support from information systems, communications and other technical personnel. These individuals should get the following minimum training:

- FACNET Architecture
- EDI Training
- Internet Training
- GSA internal EC architecture

9.3 Sources of EC/EDI Training and Information

There is a great deal of both formal and informal training and information available for EC/EDI. The following are some sources:

- *Federal Acquisition Institute*

The Federal Acquisition Institute (FAI) is run by GSA for OFPP. The FAI offers training on the Federal Acquisition Streamlining Act and FACNET. Courses can be accessed via the GSA Internet World Wide Web home page (http://www.gsa.gov).

- *Electronic Commerce Resource Centers (ECRC)*

Electronic Commerce Resource Centers are run by DOD's Advanced Projects Research Agency (ARPA). The centers are primarily for business assistance but do offer training to Federal agencies.

- *Department of Defense*

DoD offers a number of courses on EC/EDI in addition to those offered by the ECRCs.

- *Small Business Administration*

Like the ECRCs, SBA's training is mainly geared to business but does offer some training for Federal agencies.

- *Universities*

A number of universities offer short courses in basic EDI.

- *Private Sector*

Like the universities, a variety of private firms are offering short courses in EDI. Most of these are technical but there are overview courses offered.

- *Internet*

A great deal of EC/EDI information is available via the Internet. The following are some of the major Federal government home pages for EC/EDI information:

1) ECPMO

http://www.gsa.gov/ecapmo

2) Electronic Commerce Resource Center

http://www.ecrc.ctc.com/

3) Department of Defense

http://www.acq.osd.mil

4) Small Business Administration

http://www.sbaonline.sba.gov

- *Data Interchange Standards Association (DISA)*

DISA is an association that supports various standards organizations. Another part of its role is to provide education and training on EC/EDI. Information on DISA can be accessed via their Internet Home Page http://www.disa.org.

- *Other Sources*

Other good sources of EC/EDI training and information include: conferences and forums, regional user groups, and trade publications.

10.0 Conclusions

As this document indicates, GSA is moving rapidly towards implementing electronic commerce. A number of applications are already being used while others will soon follow. This movement toward EC/EDI will be affected by a number of factors including:

- The impact of the Internet and other technological advances
- Commercial practices
- Governmentwide efforts in EC/EDI
- The future role of GSA
- Budget cutbacks.

Any or all of the above factors could greatly change how GSA does EC/EDI and how quickly GSA moves toward EC/EDI applications. Regardless of how or when it happens, EC/EDI will eventually become the primary way that GSA conducts business.

The impact of EC/EDI will cause not only changes in how GSA deals with its vendors but also in internal processes. EC and EDI will create opportunities for reengineering procurement, financial and administrative processes. Over the next several years, GSA will be fully implementing EC and EDI. To take full advantage of EC/EDI, GSA will need to streamline and change the current way of doing business. The result will be a GSA positioned to help lead Federal government procurement into the 21st century.

Appendix A
Systems Inventory

This Appendix contains a detailed description of the principal procurement and procurement-related systems employed by GSA. A system description and current and future EC/EDI capabilities are identified for each system.

Office of Acquisition Policy

System Name: Electronic List of Parties Excluded from Federal Procurement or Nonprocurement Programs

System Description and Current EC/EDI Capabilities: The List is scheduled for platform replacement. As a result, the Office of Acquisition Policy (OAP) is working with the Office of the Chief Information Officer (CIO) to finalize a plan for the conversion. Reengineering efforts are planned for this conversion. For example, OAP will be working to eliminate the use of data input and rely on electronic downloading of data. OAP also plans on holding discussions with users for the purpose of reengineering and enhancing List operations.

Planned EC/EDI Capabilities: The most significant enhancements to the List are to eliminate reliance on paper records and to move to electronic input and retrieval and add Internet access.

EDI Transaction Types: Not Applicable

System Owner:	Office of Acquisition Policy
Point of Contact:	Don Suda
Telephone Number:	202-501-1224

Office of Administration

System Name: CAF Procurement System

System Description: This system tracks procurement actions by ACT number, classification, date received, office, purchase order number, contract specialist, and vendor. Additionally, this system facilitates the GPDS reporting requirements.

Planned EC/EDI Capabilities: An interface between TREK and the CAF Procurement System is being developed. CAF uses TREK (Transmit Records Electronically and Kwickly) to produce GSA Form 300 Purchase Orders. The interface will take requisition data from TREK and automatically updates the procurement system. TREK allows the user to manually input data into a purchase order or automatically create a purchase order from an electronic GSA Form 49 Requisition by pressing a button so all common data is transferred to the new record. In either case the purchase order is then electronically signed by the contracting officer and routed. TREK is capable of printing a purchase order for distribution to vendors or, as EDI trading partners are identified, TREK will distribute purchase orders by EDI transmission. NEAR/ITAP is updated with electronic purchase orders and receiving reports from some IT offices through TREK. The FPDS can be electronically compiled through TREK. TREK will eventually transmit the FPDS data electronically.

EDI Transaction Types: Purchase Order (TS850), expanding to Purchase Order Acknowledgment (TS855), Request for Quotation (TS840), Response to Request for Quotation (TS843), and Contract Award (TS836) as needed.

System Owner:	Office of Administration (CAF)
Point of Contact:	Lois M. Roberts
Telephone Number:	202-501-1720

Office of the Chief Financial Officer

System Name: National Electronic Accounting and Reporting (NEAR) System

System Description: NEAR is GSA's centralized accounting and financial system. It is designed to control, classify, record, and summarize financial events. The system provides accountability at all levels for annual, multiple, and no-year funds and other special types of funds. This includes transaction editing, disbursement processing, general ledger and subsidiary update, and cost distribution.

Current EC/EDI Capabilities: NEAR/FEDPAY currently receives electronic purchase order records from FSS-19, as well as, EDI invoices from some vendors requesting payment for those goods. NEAR/ITAP receives electronic purchase orders and receiving reports from some IT offices through the TREK system. Electronic billing information is received from several agency systems.

Planned EC/EDI Capabilities: NEAR will be enhanced to accept electronic purchase orders and receiving reports, in a standardized format, from all Services/Staff Offices (S/SO). Procedures will also be developed to process 810 Invoices for the S/SO purchase orders.

EDI Transaction Types: 810 invoice records.

System Owner:	Office of the CFO
Point of Contact:	Barbara Sease
Telephone Number:	202-501-4274

Federal Telecommunications Service (FTS)

System Name: FTS Billing Management System (FBMS)

System Description: FBMS supports the FTS by providing automation to facilitate invoice verification and agency billing. It also provides financial management information necessary for budget control. Service order data is received from the FTS contractors in electronic and paper formats and entered into FBMS. Contractor billing tapes are processed by FBMS to produce reports used for invoice verification and agency billing. Billing information is sent via electronic media to the agency accounting system for billing.

Current EC/EDI Capabilities: None.

Planned EC/EDI Capabilities: There are no planned enhancements planned for this system.

EDI Transaction Types: Not Applicable

System Owner: FTS

Point of Contact: Lois Sather

Telephone Number: 703-760-7731

Federal Supply Service (FSS)

System Name: Electronic System for Procurement (ESP)

System Description and Current EC/EDI Capabilities: FSS-19 is a legacy system implemented in November 1980, which automated the logistics functions and most of the procurement administrative functions. This includes contract data, item data, order writing, contract administration, and finance interfaces. In 1987, EDI capability was established for purchase orders and is already delivering 30 percent of the yearly number of purchase orders to over 140 trading partners in the vendor community.

The reengineering process started in June 1994, when FSS began designing EDI enhancements to develop the Request for Quotations (840 transaction set), quotes (843 transaction set), and awards (836 transaction set) system to streamline the small purchase process. This same approach will be used for large procurements as a second phase. These systems will take a requisition from FSS-19 through the PC-based system for a fully automated procurement process. They will connect with the Gateway and FACNET.

These reengineering efforts will become part of the FSS Information Strategy Plan (ISP). The ISP will identify what procurement

information needs are to streamline the business processes.

Planned EC/EDI Capabilities: ESP will provide for automation of the procurement process from receipt of a requirement from the FSS-19 legacy system through completion of the billing cycle. ESP will handle procurement planning, required notices, preparation of procurement documents, evaluation, and distribution of awards in connection with the EDI interfaces to the vendor community described above. The overall objective is to move to a client PC/server environment, which is planned to be on a Sun SPARC center, using SyBase and PowerBuilder to provide a decentralized system in the operating procurement office.

System Owner: FSS

Point of Contact: Ralph Hostetter

Telephone Number: 703-305-6246

Table 10: EDI Transaction Types:

Transaction Sets	
810	Invoice
811	Consolidated Service Invoice Statement
812	Credit/Debit Adjustment
820	Payment Order/Remittance Advice
840	RFQ
843	Response to RFQ
850	Purchase Order
855	Purchase Order Acknowledgment
860	Purchase Order Request-Buyer Initiated
865	Purchase Order Change Acknowledge/Request-Seller Initiated
997	Functional Acknowledgment

Federal Supply Service (FSS)

System Name: FSS EDI and FSS-19

System Description: The FSS EDI system uses EaDIplus X12 software in a UNIX environment to "map" purchase order data (850 transaction set) and amendments (860 transaction set) from FSS-19 and translate it for delivery to the VAN (US SPRINT) mailbox for distribution and receive invoices (810 transaction set) from FSS vendors via the VAN. The FSS-19 system is a mainframe, batch process system on a nationwide "backbone" communications network which supports automated operation and interface of virtually all logistics functions. In procurement, this includes processing incoming on-line and manual requisitions, generation of replenishment requisitions for stock, creation of requirements for multi-year procurement of large groups of items, contract and item data bases with an automated order writing system and interfaces with the Office of the CFO and GPDS.

Current EC/EDI Capabilities: Send 850 and 860 transaction sets, receive invoices (810 transaction set), receive acknowledgments (997 transaction set), from trading partners. Current volume is about 20,000 transactions per month with 200 trading partners, which have executed a standard trading partner agreement. An automated FAX system is operational and is used to transmit the remaining purchase orders. Over 4,000 vendors receive FAX orders. All new contracts and purchase orders will require vendor receipt by EDI or FAX.

Planned EC/EDI Capabilities: The current FSS EDI program essentially meets the short-term objective, but plans include adding simplified acquisition procedures, RFQs and responses. FSS expects to be able to use this automated electronic RFQ feature and map it to the EDI translator by early 1996. Purchase order issuance will be through the existing FSS EDI system.

EDI Transaction Types: RFQ (transaction set 840), RFQ response (transaction set 843) (until the ECAT vendor registration system is in place, the Electronic Bulletin Board (EBB) will have to support this function), plus purchase order (850 and 860) and invoice transactions (810) in current FSS EDI program.

System Owner:	FSS
Point of Contact:	Teresa Sorrenti
Telephone Number:	703-305-6514

Office of the Chief Financial Officer

System Name: Electronic Task Orders (ETO)

System Description: The Federal Information Systems Support Program (FISSP) is designed to assist the Federal community by providing FIP support by means of commercial contractors. Substantial requirements contracts are awarded to address the future needs of Federal agencies within a given geographic area. As individual FIP requirements are identified by client agencies, a task order is issued to provide the necessary support to fulfill the requirements.

The procurement process, as it relates to the processing of individual task orders with a requirements contract, currently involves extensive human-to-human interface and predominately takes the form of paperwork. The purpose of ETO is to permit the issuance of FIP requirements to contractors electronically, receive contractor proposals electronically, and issue

Table 11 EDI Transaction Types

Transaction Sets	
810	Invoice
811	Consolidated Service Invoice Statement
812	Credit/Debit Adjustment
820	Payment Order/Remittance Advice
832	Catalog
840	RFQ
843	Response to RFQ
850	Purchase Order
855	Purchase Order Acknowledgment
860	Purchase Order Request-Buyer Initiated
864	Text Message
865	Purchase Order Change Acknowledge/Request-Seller Initiated
997	Functional Acknowledgment

resultant purchase orders electronically. In addition, financial issues such as funding, billing, invoicing, and payments will be addressed electronically.

Current EC/EDI Capabilities: In ETO, processing takes place in a Lotus Notes groupware environment, which provides for multi-site replication as well as full interface and integration of multi-party input.

Planned EC/EDI Capabilities: Long-term enhancements include a full interface with GPDS.

System Owner:	CIO
Point of Contact:	Cathy Paris/ Ann Gladys
Telephone Number:	415-744-8538 619-537-2201

Federal Telecommunications Service

System Name: Telecommunications Ordering and Pricing System (TOPS)

System Description: TOPS provides automated access by GSA customers to order telecommunications services and equipment; accepts and reconciles invoices from telecommunications providers; and generates billing data to GSA customers for services rendered.

Current EC/EDI Capabilities: The system has been designed to accept and process EDI transactions. The vendor invoice (811 transaction set) is being integrated into the application. The transaction set for placing orders is under development by the Telecommunications Industry Forum and will be integrate in TOPS once accepted.

Planned EC/EDI Capabilities: This system does not process any requests for quotations, quotes, purchase orders, or notice of awards. However, this system does process orders for telecommunications equipment and services. The Telecommunications Industry Forum (TCIF) is currently establishing the transaction sets and elements for use by the industry. Upon completion, the Office of the CIO will proceed to

implement these transaction sets. In the meantime, the Office of the CIO will implement the 811 invoice transaction set.

EDI Transaction Types: 811 and eventually the 850, 855, 860, 865, and 997.

System Owner: FTS

Point of Contact: John Morenz

Telephone Number: 202-501-3355

Office of the Chief Information Officer

System Name: Transmit Records Electronically and "Kwickly" (TREK)

System Description: TREK performs a number of functions including, but not limited to, the following:

- Transmits forms between offices and ensures timely and reliable delivery.
- Provides information about the location of a form.
- Performs records management using record keeping rules.
- Allows printing of the document (if necessary) by any office.
- Provides the capability to interface with existing ADP application systems.
- Provides electronic signature capability.
- Protects sensitive data.

  NEAR/ITAP is updated with electronic purchase orders and receiving reports from some IT offices through TREK.
- Provides every office with the capability to:
  - View, but not change, the official copy of the form after they process it. The official copy of the form and the actual routing will be stored at a "central" location.

- Create "office" disposition rules (unofficial copy).
- Determine intra-office route stops. This means an office will have the ability to create internal or ad hoc routing stops. Every stop the form makes whether it is part of the original routing or not will be recorded in the "official routing log". This will identify the exact location of the form at any given time.
- Send "final action" notice to the originator.

Enhancements to original system:

- A button has been added to the GSA Form 300 Purchase Order which checks that a record has been signed by a contracting officer; confirms the format of EDI transmitted fields including DUNS numbers and queues the record for EDI translation and transmission.
- Buttons on all forms to create the next form in the procurement process which carries all common data to the new record.
- The ability to copy a record to create another similar record saving time and data entry errors is available through a button.
- A Credit Card module was developed in TREK, using the same principles of data entry by the originator, electronic transmission of the document through approvals, and maintaining electronic documentation of the buy. Invoices received from the vendors may be scanned and "attached" to the electronic record, entirely eliminating the need for paper.

Short-Term Plans: The following enhancements are planned:

- Provide access to TREK for all offices that request it.
- Develop new modules to perform functions using the TREK features. GSA 3282, Allowance and GSA 2520, Allotment are being developed for a joint project between PBS and Budget.
- Develop other new forms for TREK, specifically for the Procurement offices, GSA 1535, Recommendation for Award, GSA 2689, Procurement Not Set Aside, GSA 3584, Checklist, SF 18, Request for Quotation, SF 26, Award/Contract, SF 30, Amendment of Solicitation, SF 33, Solicitation, Offer and Award will be developed. Other candidates are the GSA 3076, Request for Training; SF 1164, Claim for Reimbursement; and SF 52, Request for Personnel Action. Coordination with the responsible offices will determine which forms will be added.

Current EC/EDI Capabilities: In development. Certification through the GSA Gateway accomplished 8/95. First test transmissions with partners occurred 9/95. Working with procurement offices to develop trading partners to begin daily EDI transactions. Records queued for EDI transmission are exported to a flat file, translated to X12 format and sent via FTP to FSS for transmission through the Gateway. The CFO's NEAR/ITAP is updated with electronic purchase orders and receiving reports from IT offices through TREK since 12/93.

EDI Transaction Types: Purchase Order (TS850), Purchase Order Acknowledgment (TS855), expanding to Request for Quotation (TS840), Response to Request for Quotation (TS843), and Contract Award (TS836) as needed.

System Owner:	CIO
Point of Contact:	Susie Kampans
Telephone Number:	202-501-2510

Public Buildings Service (PBS)

System Name: The Federal Electronic Acquisition System (EAS)

System Description: ITS in Region 3 awarded the FAME replacement procurement for the federal Electronic Acquisition System (EAS) on July 18, 1995. One of the objectives of this software is to replace the Federal Acquisition Management Evaluation (FAME) system and the FAME architecture, which is established on outmoded Convergent Technology (CT) equipment using dated 4GL and a proprietary version of PASCAL. Both the current CT equipment and operating system are at maximum system life cycle. However, a CT maintenance contract was awarded in June, 1995 and is on a month to month basis. Another objective is to support the acquisition initiatives by all PBS offices. Further, the EAS is suitable for the applications of other GSA Services.

Planned EC/EDI Capabilities: The EAS is a commercial application software which includes EC/EDI capability.

EDI Transaction Types: Supports the 3010 convention with the exception of the 838 transaction set, which is the 3020 convention. Will support 3040 conventions and beyond as required.

System Owner: PBS

Point of Contact: Erwin Shalowitz (PP)

Telephone Number: 202-501-2120

Public Buildings Service (PBS)

System Name: Federal Acquisition Management and Evaluation (FAME) System

System Description: FAME automates the manual procurement functions used by PBS Business Lines. For program and contracting personnel, FAME:

- Eliminates redundant record-keeping by capturing key procurement request and contract data in files stored in a central database located within the region.
- Uses the stored data to automatically generate reports and Standard and GSA forms.
- Uses the stored data to automatically generate CBD reporting/transmittal files.
- Maintains logs and tracks contract milestones from the initial procurement request stage until contract closeout.
- Uses data obtained electronically from the NEAR system.
- Provides the GPDS reporting.

For management personnel, FAME provides both summary and detailed reports on such areas of interest as workload accomplishments, contract inventory, contract status, and bidder profiles.

Current EC/EDI Capabilities: Limited. CBD Announcement Transmissions.

Planned EC/EDI Capabilities: Will be replaced by the EAS.

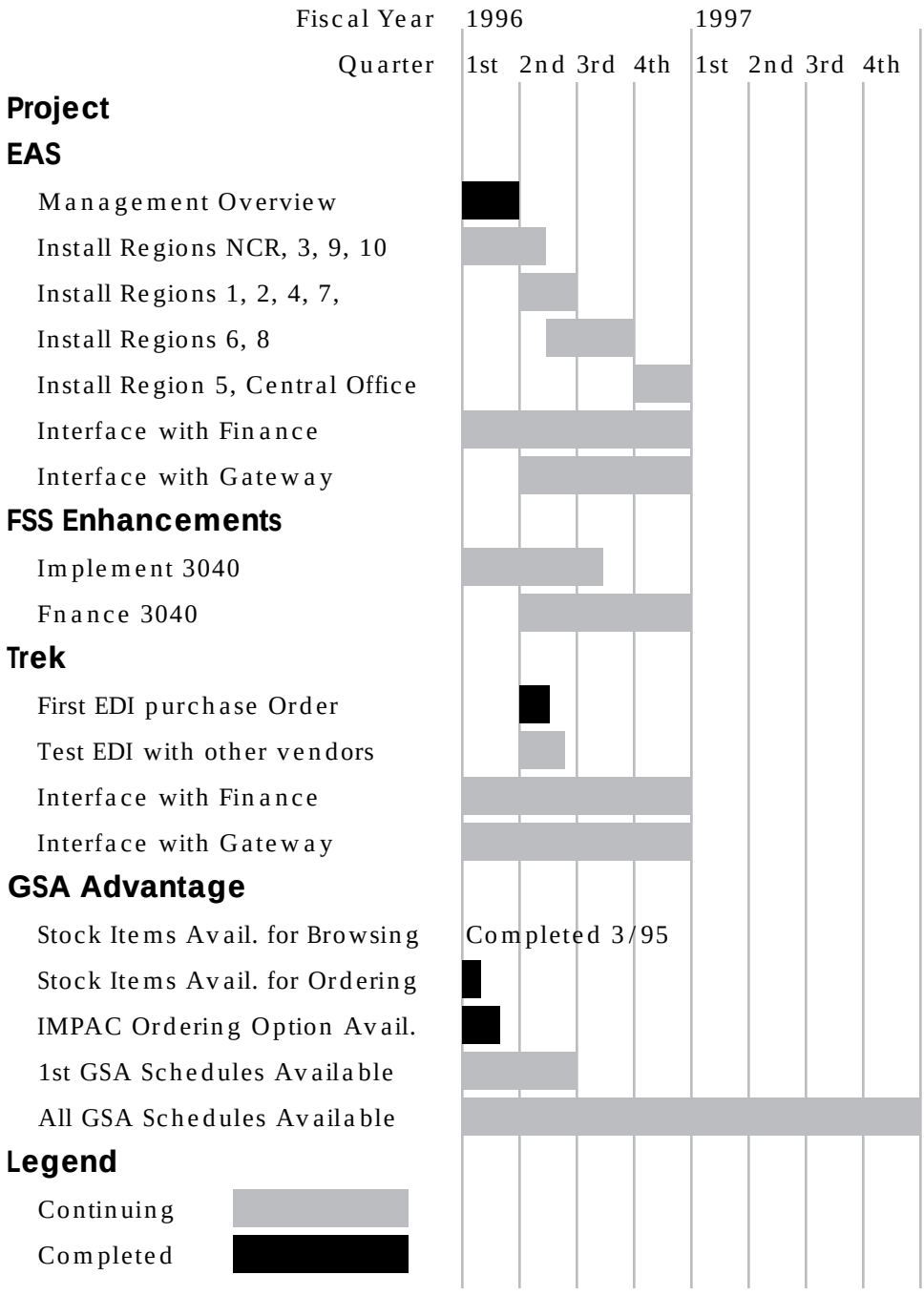
EDI Transaction Types: Not Applicable

System Owner: PBS (PP/PK)

Point of Contact: Earl Warrington (PP)/Lana Watkins (PK)

Telephone Number: 202-501-3479
501-9178

Appendix B Milestone Schedule



Appendix C Agency Points of Contact

EC Task Force

Chairperson Tony Trenkle . . MVP
John Beckman . . . . . FC
Ron Bess . . . . . IOS
Norma Carey . . . . . EU
Sherry Coffman. . . . . IOS
Terry Gricher. . . . . BDI
Dian Hartwick. . . . . PP
Susie Kampans . . . . . ION
Carol Koontz . . . . . KR
Clark McDonald . . . . . CAFP
George May . . . . . TDA
Lois Roberts . . . . . CAFP
Barbara Sease. . . . . BC
Teresa Sorrenti. . . . . FCS
Donald Szejner . . . . . TDA
Earl Warrington. . . . . PP
Dick Young . . . . . FIC

EC Steering Committee

Chairperson Ida Ustad . . . . MV
Louis Adams . . . . . PK
Jim Arrington . . . . . KR
Dave Cleveland . . . . . TDA
Bill Gormley . . . . . FC
Ray Hanlein . . . . . FI
Bob Suda. . . . . BC
Bill Topolewski. . . . . BD
Don Venneberg. I
Marty Wagner . . . . . M

EC Regional Points of Contact

Greg Bowman. 1AQ
Helen Shuldiner. 2CA
Ted Hall 3BB
Mike Wano 3BB
Gary Mote. 4A
Paul Rasmussen 5A
Patricia Brown-Dixon. 6A
Jery Cochran 7BC
Dolly Fernandez 8PC
Dee Berry 8POD
David Roth 9ADQ
Phyllis Volin. 10A
Craig Kennedy . . . . . WKE
John Vitale . . . . . WAD